Exploring the Extreme			
2009 Science			
Essential Knowledge and Skills			
Texas Science			
Grade K			
Activity/Lesson	**State**	**Standards**	
Finding the Center of Gravity Using Rulers	TX	SCI.K.2.B	plan and conduct simple descriptive investigations such as ways objects move;
Finding the Center of Gravity Using Rulers	TX	SCI.K.2.C	collect data and make observations using simple equipment such as hand lenses, primary balances, and non-standard measurement tools;
Finding the Center of Gravity Using Rulers	TX	SCI.K.2.E	communicate observations with others about simple descriptive investigations.
Finding the Center of Gravity Using Rulers	TX	SCI.K.6.C	observe and describe the location of an object in relation to another such as above, below, behind, in front of, and beside; and
Finding the Center of Gravity Using Rulers	TX	SCI.K.6.D	observe and describe the ways that objects can move such as in a straight line, zigzag, up and down, back and forth, round and round, and fast and slow.
Exploring the Extreme			
2009 Science			
Essential Knowledge and Skills			
Texas Science			
Grade 1			
Activity/Lesson	**State**	**Standards**	
Finding the Center of Gravity Using Rulers	TX	SCI.1.2.B	plan and conduct simple descriptive investigations such as ways objects move;
Finding the Center of Gravity Using Rulers	TX	SCI.1.2.C	collect data and make observations using simple equipment such as hand lenses, primary balances, and non-standard measurement tools;
Finding the Center of Gravity Using Rulers	TX	SCI.1.2.E	communicate observations and provide reasons for explanations using student-generated data from simple descriptive investigations.
Finding the Center of Gravity Using Rulers	TX	SCI.1.3.B	make predictions based on observable patterns;
Finding the Center of Gravity Using Rulers	TX	SCI.1.4.B	measure and compare organisms and objects using non-standard units.
Finding the Center of Gravity Using Rulers	TX	SCI.1.6.D	demonstrate and record the ways that objects can move such as in a straight line, zig zag, up and down, back and forth, round and round, and fast and slow.

Exploring the Extreme			
2009 Science			
Essential Knowledge and Skills			
Texas Science			
Grade 2			
Activity/Lesson	**State**	**Standards**	
Finding the Center of Gravity Using Rulers	TX	SCI.2.2.C	collect data from observations using simple equipment such as hand lenses, primary balances, thermometers, and non-standard measurement tools;
Finding the Center of Gravity Using Rulers	TX	SCI.2.2.E	communicate observations and justify explanations using student-generated data from simple descriptive investigations; and
Finding the Center of Gravity Using Rulers	TX	SCI.2.3.B	make predictions based on observable patterns;
Exploring the Extreme			
2009 Science			
Essential Knowledge and Skills			
Texas Science			
Grade 3			
Activity/Lesson	**State**	**Standards**	
Finding the Center of Gravity Using Rulers	TX	SCI.3.2.A	plan and implement descriptive investigations, including asking and answering questions, making inferences, and selecting and using equipment or technology needed, to solve a specific problem in the natural world;
Finding the Center of Gravity Using Rulers	TX	SCI.3.2.B	collect data by observing and measuring using the metric system and recognize differences between observed and measured data;
Finding the Center of Gravity Using Plumb Lines	TX	SCI.3.2.A	plan and implement descriptive investigations, including asking and answering questions, making inferences, and selecting and using equipment or technology needed, to solve a specific problem in the natural world;
Finding the Center of Gravity Using Plumb Lines	TX	SCI.3.2.B	collect data by observing and measuring using the metric system and recognize differences between observed and measured data;
Finding the Center of Gravity Using Plumb Lines	TX	SCI.3.2.D	analyze and interpret patterns in data to construct reasonable explanations based on evidence from investigations;
Changing the Center of Gravity Using Moment Arms	TX	SCI.3.2.B	collect data by observing and measuring using the metric system and recognize differences between observed and measured data;

Changing the Center of Gravity Using Moment Arms	TX	SCI.3.2.C	construct maps, graphic organizers, simple tables, charts, and bar graphs using tools and current technology to organize, examine, and evaluate measured data;
Changing the Center of Gravity Using Moment Arms	TX	SCI.3.2.F	communicate valid conclusions supported by data in writing, by drawing pictures, and through verbal discussion.
Changing the Center of Gravity Using Moment Arms	TX	SCI.3.3.D	connect grade-level appropriate science concepts with the history of science, science careers, and contributions of scientists.
Exploring the Extreme			
2009 Science			
Essential Knowledge and Skills			
Texas Science			
Grade 4			
Activity/Lesson	**State**	**Standards**	
Finding the Center of Gravity Using Rulers	TX	SCI.4.2.A	plan and implement descriptive investigations, including asking well-defined questions, making inferences, and selecting and using appropriate equipment or technology to answer his/her questions;
Finding the Center of Gravity Using Rulers	TX	SCI.4.2.B	collect and record data by observing and measuring, using the metric system, and using descriptive words and numerals such as labeled drawings, writing, and concept maps;
Finding the Center of Gravity Using Rulers	TX	SCI.4.2.F	communicate valid, oral, and written results supported by data.
Finding the Center of Gravity Using Plumb Lines	TX	SCI.4.2.A	plan and implement descriptive investigations, including asking well-defined questions, making inferences, and selecting and using appropriate equipment or technology to answer his/her questions;
Finding the Center of Gravity Using Plumb Lines	TX	SCI.4.2.D	analyze data and interpret patterns to construct reasonable explanations from data that can be observed and measured;
Changing the Center of Gravity Using Moment Arms	TX	SCI.4.2.A	plan and implement descriptive investigations, including asking well-defined questions, making inferences, and selecting and using appropriate equipment or technology to answer his/her questions;
Changing the Center of Gravity Using Moment Arms	TX	SCI.4.2.B	collect and record data by observing and measuring, using the metric system, and using descriptive words and numerals such as labeled drawings, writing, and concept maps;

Changing the Center of Gravity Using Moment Arms	TX	SCI.4.2.C	construct simple tables, charts, bar graphs, and maps using tools and current technology to organize, examine, and evaluate data;
Changing the Center of Gravity Using Moment Arms	TX	SCI.4.2.F	communicate valid, oral, and written results supported by data.
Changing the Center of Gravity Using Moment Arms	TX	SCI.4.3.B	draw inferences and evaluate accuracy of services and product claims found in advertisements and labels such as for toys, food, and sunscreen;
Exploring the Extreme			
2009 Science			
Essential Knowledge and Skills			
Texas Science			
Grade 5			
Activity/Lesson	**State**	**Standards**	
Jet Propulsion	TX	SCI.5.2.A	describe, plan, and implement simple experimental investigations testing one variable;
Jet Propulsion	TX	SCI.5.2.C	collect information by detailed observations and accurate measuring;
Vectoring	TX	SCI.5.2.A	describe, plan, and implement simple experimental investigations testing one variable;
Vectoring	TX	SCI.5.2.B	ask well-defined questions, formulate testable hypotheses, and select and use appropriate equipment and technology;
Vectoring	TX	SCI.5.2.C	collect information by detailed observations and accurate measuring;
Vectoring	TX	SCI.5.2.D	analyze and interpret information to construct reasonable explanations from direct (observable) and indirect (inferred) evidence;
Center of Gravity, Pitch, Yaw	TX	SCI.5.2.C	collect information by detailed observations and accurate measuring;
Center of Gravity, Pitch, Yaw	TX	SCI.5.3.C	draw or develop a model that represents how something works or looks that cannot be seen such as how a soda dispensing machine works
Exploring the Extreme			
2009 Science			
Essential Knowledge and Skills			
Texas Science			
Grade 6			
Activity/Lesson	**State**	**Standards**	

Jet Propulsion	TX	SCI.6.2.A	plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology;
Jet Propulsion	TX	SCI.6.2.B	design and implement experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
Jet Propulsion	TX	SCI.6.2.C	collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
Jet Propulsion	TX	SCI.6.8.D	measure and graph changes in motion
Vectoring	TX	SCI.6.2.A	plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology;
Vectoring	TX	SCI.6.2.B	design and implement experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
Vectoring	TX	SCI.6.2.C	collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
Vectoring	TX	SCI.6.8.B	identify and describe the changes in position, direction, and speed of an object when acted upon by unbalanced forces;
Vectoring	TX	SCI.6.8.C	calculate average speed using distance and time measurements;
Center of Gravity, Pitch, Yaw	TX	SCI.6.8.B	identify and describe the changes in position, direction, and speed of an object when acted upon by unbalanced forces;
Center of Gravity, Pitch, Yaw	TX	SCI.6.8.C	calculate average speed using distance and time measurements;
Center of Gravity, Pitch, Yaw	TX	SCI.6.8.D	measure and graph changes in motion
Exploring the Extreme			
2009 Science			
Essential Knowledge and Skills			
Texas Science			
Grade 7			
Activity/Lesson	**State**	**Standards**	

Jet Propulsion	TX	SCI.7.2.A	plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology;
Jet Propulsion	TX	SCI.7.2.B	design and implement experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
Jet Propulsion	TX	SCI.7.2.C	collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
Vectoring	TX	SCI.7.2.A	plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology;
Vectoring	TX	SCI.7.2.B	design and implement experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
Vectoring	TX	SCI.7.2.C	collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
Fuel Efficiency	TX	SCI.7.2.D	construct tables and graphs, using repeated trials and means, to organize data and identify patterns
Exploring the Extreme			
2009 Science			
Essential Knowledge and Skills			
Texas Science			
Grade 8			
Activity/Lesson	**State**	**Standards**	
Jet Propulsion	TX	SCI.8.2.A	plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology;
Jet Propulsion	TX	SCI.8.2.B	design and implement comparative and experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology;

Jet Propulsion	TX	SCI.8.2.C	collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
Jet Propulsion	TX	SCI.8.9.A	describe the historical development of evidence that supports plate tectonic theory;
Vectoring	TX	SCI.8.2.A	plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology;
Vectoring	TX	SCI.8.2.B	design and implement comparative and experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology;
Vectoring	TX	SCI.8.2.C	collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers;
Fuel Efficiency	TX	SCI.8.2.D	construct tables and graphs, using repeated trials and means, to organize data and identify patterns